



Aviation Investigation Final Report

Location:	LOS ANGELES, California	Incident Number:	LAX97IA300
Date & Time:	August 24, 1997, 13:50 Local	Registration:	N862PA
Aircraft:	Airbus Industrie A300 B4-203	Aircraft Damage:	Minor
Defining Event:		Injuries:	265 None
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

Analysis

After feeling a vibration in the aircraft during the takeoff roll, the cockpit crew heard a loud bang and the right-hand (number 2) engine failed. The captain rejected the takeoff and stopped the airplane on the remaining runway. Postincident examination revealed that the tire tread was absent from the number 3 tire on the right-hand main landing gear. One piece of black rubber resembling the tire tread was found lodged in the fan outlet guide vanes. Black smearing marks were observed on several of the fan blades and bent stator vanes of the engine, which also resembled the tire tread material. There was substantial damage to the engine and minor airframe damage.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be: Separation of the landing gear tire tread and subsequent ingestion of the tread into the intake of the engine.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: TAKEOFF - ROLL/RUN

Findings

1. (C) LANDING GEAR, TIRE - SEPARATION
2. (C) LANDING GEAR, TIRE - LOSS, PARTIAL

Occurrence #2: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: TAKEOFF - ROLL/RUN

Findings

- 3. 1 ENGINE
- 4. (C) LANDING GEAR,TIRE - INGESTED
- 5. COMPRESSOR ASSEMBLY, FORWARD FAN - FOREIGN OBJECT DAMAGE
- 6. COMPRESSOR ASSEMBLY - FOREIGN OBJECT DAMAGE

Factual Information

On August 24, 1997, at 1350 hours Pacific daylight time, an Airbus A300 B4-203, N862PA, lost power to the number 2 engine and aborted the takeoff on runway 24L at Los Angeles International Airport, Los Angeles, California. The airplane sustained minor damage. There were no injuries to the 3 cockpit crewmembers, 8 cabin crewmembers, and 254 passengers. The airplane was being operated on an instrument flight plan by Pan American World Airways as flight 6, a scheduled domestic passenger flight under 14 CFR Part 121. The flight was destined for John F. Kennedy International Airport, Jamaica, New York. Visual meteorological conditions prevailed.

The cockpit crew reported feeling a vibration in the aircraft during the takeoff roll and then hearing a loud noise while accelerating past 145 knots. According to the captain, the airplane was loaded heavily with fuel and passengers and the takeoff decision speed (V1) was 159 knots. The captain rejected the takeoff and stopped the airplane on the 10,285-foot-long runway with about 800 feet remaining.

Postincident examination revealed that the tire tread was absent from the number 3 tire on the right-hand main landing gear. One piece of black rubber resembling the tire tread (2-4 inches long) was found lodged in the fan outlet guide vanes. Black smearing marks were observed on several of the fan blades and bent stator vanes of the engine, which also resembled the tire tread material. The number 2 engine fan was destroyed and several outlet guide vanes were damaged. There was a hole through the engine fan cowl at the 6 o'clock position. The engine's accessory gearbox was fractured to the left of the constant speed drive (CSD) and generator. Oil was leaking from the fracture and two broken oil return lines from the CSD and generator. Minor damage was also observed on the right-hand landing gear door, inboard flap, and all-speed aileron.

Metallurgical examination of the failed compressor fan blades revealed that features noted along the fracture surfaces were consistent with ductile overload and rapid tensile shear. The metallurgist noted that there was no evidence of metallurgical fatigue present at the fractures and opined that liberation of the blade tips occurred as a result of a "single overload event."

The aircraft's Lockheed model 209F flight data recorder was read out and evaluated at the Safety Board's laboratory in Washington, D.C. The specialist's report is attached. The report states that both engines were operating within normal limits for a period of time before a positive lateral acceleration and a decrease in longitudinal acceleration were recorded at FDR time 5195.2 seconds, after which the aircraft decelerated. The report also notes that there were four parameters reporting erroneous values. The four were engine vibration monitors for the fan and compressor of each engine.

Pilot Information

Certificate:	Airline transport; Flight engineer	Age:	52, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	March 10, 1997
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Airbus Industrie	Registration:	N862PA
Model/Series:	A300 B4-203 A300 B4-20	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Transport	Serial Number:	211
Landing Gear Type:	Retractable - Tricycle	Seats:	265
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	351000 lbs
Time Since Last Inspection:		Engines:	2 Turbo jet
Airframe Total Time:		Engine Manufacturer:	GE
ELT:	Not installed	Engine Model/Series:	CF6-50C2
Registered Owner:	EAL DELAWARE VIII CORP.	Rated Power:	51000 Lbs thrust
Operator:	PAN AMERICAN WORLD AIRWAYS, IN	Operating Certificate(s) Held:	Flag carrier (121)
Operator Does Business As:		Operator Designator Code:	UNK

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	LAX ,126 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	13:50 Local	Direction from Accident Site:	180°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	15 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	270°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	27°C / 17°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(LAX)	Type of Flight Plan Filed:	IFR
Destination:	JAMAICA (JFK)	Type of Clearance:	IFR
Departure Time:	13:50 Local	Type of Airspace:	Class B

Airport Information

Airport:	LOS ANGELES INTERNATIONAL LAX	Runway Surface Type:	Concrete
Airport Elevation:	126 ft msl	Runway Surface Condition:	Dry
Runway Used:	24L	IFR Approach:	
Runway Length/Width:	10285 ft / 150 ft	VFR Approach/Landing:	

Wreckage and Impact Information

Crew Injuries:	11 None	Aircraft Damage:	Minor
Passenger Injuries:	254 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	265 None	Latitude, Longitude:	33.950813,-118.400291(est)

Administrative Information

Investigator In Charge (IIC):	Wilcox, Thomas
Additional Participating Persons:	DONALD L SKUNBERG; EL SEGUNDO , CA JAMES L THORPE; LYNN , MA ANTHONY N GAETA; MIAMI , FL
Original Publish Date:	January 28, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=29649

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).